





2027

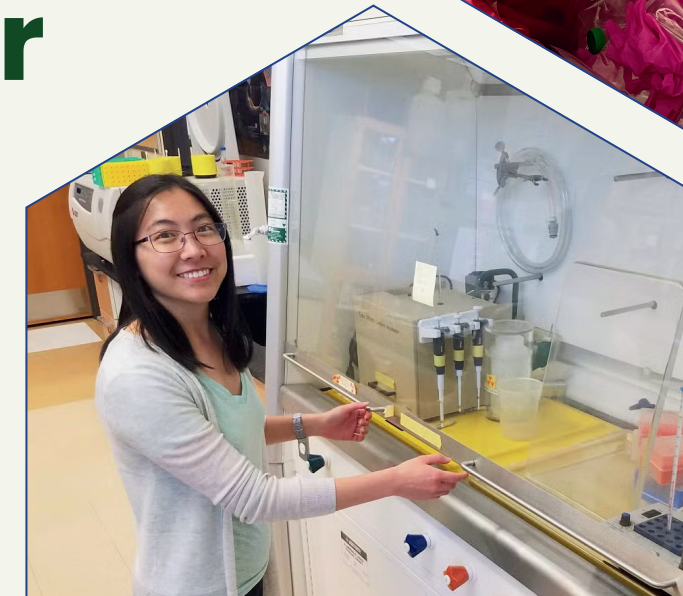
UNIVERSITY OF MARYLAND

GREENLABS

Annual Calendar







greenlabs@umd.edu

greenlabs.umd.edu

JANUARY 2027

NEW YEAR, *New Habits*

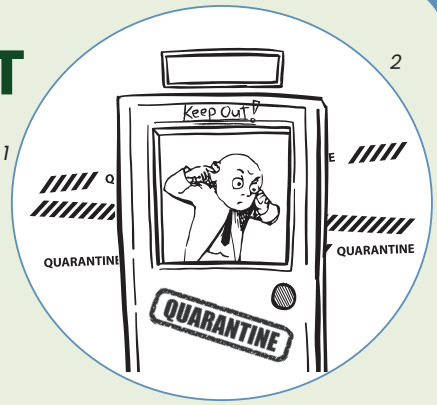
Tips for Forming New Habits

1. **Start small.** Get all lab members on board with making one simple change, like shutting the fume hood sashes when not in use.
2. **Post visual reminders.** Create sticky notes with reminders, such as waiting to run the autoclave until it is full. Or, download and print signage from the Green Labs webpage.
3. **Remain accountable.** Revisit goals during lab meetings. Talk about what is going well, barriers, and how to make habits easier to maintain.

FUN FACT

It takes between 59 to 66 days to form a new habit.

That means if you begin working towards a new sustainable habit now, you will have the habit down by spring break!



"Poor work habits can be contagious, so we usually quarantine our new employees for a period of observation."

LEARN MORE

Scan to learn more about habit development and view a list of sustainable habits to try this year.

New Year's Resolutions

1. Set Green Goals
2. Hang Signage
3. Check-in monthly

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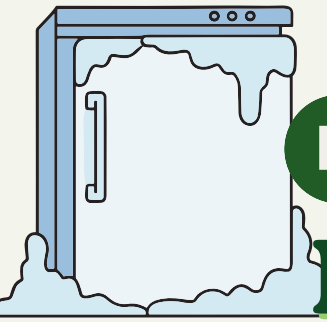
01 JANUARY 2027

SUN	MON	TUE	WED	THU	FRI	SAT
27	28	29	30	31	1 *New Year's Day*	2
3	4 *Winter Term Classes Start*	5	6	7	8	9
10 *National Cut Your Energy Costs Day*	11	12	13	14	15	16
17	18 *Martin Luther King Jr. Day*	19	20	21	22 *Winter Term Classes End*	23
24 *International Day of Education*	25	26	27 *Spring Semester Classes Start*	28 *International Reducing CO_2 Emissions Day*	29	30
31	1	2	3	4	5	6



FEBRUARY 2027

FREEZER MANAGEMENT & Cold Storage

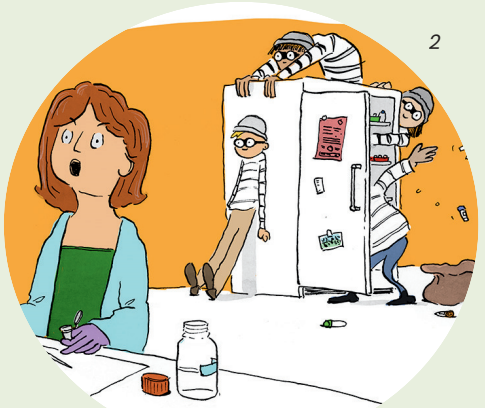
Tips on Protecting Your Cold Storage Equipment [4]

1. **Raise the Set Point.** If not strictly necessary to keep the freezer at -80°C for experiments, try raising the set-point to -75°C or -70°C.
2. **Pre-Cool Samples.** Room-temperature samples can cause temperature spikes in your freezer. Take a minute to cool samples on ice or in a standard freezer before storing in the ULT.
3. **Keep Freezers Full, But Organized.** ULT freezers best maintain their temperature when full, but don't overload them! Keep freezers organized with well-labeled boxes or sample inventory to speed up retrieval and minimize open door time.
4. **Scheduled Cleanings.** Thaw out your ULT freezer annually. Include maintenance for the condenser, air filters, and door gaskets to keep freezers running efficiently.

FUN FACT

The first refrigeration technology was invented by Persian scientist Ibn Sina in the **11th Century.** [1]

Refrigeration technology is older than eyeglasses!



"The lab down the hall is raiding our freezer again!" [2]

LEARN MORE

Scan to learn more about ULT freezers, management, and effects on samples stored at various temperatures.

ULT Freezer Cleaning Checklist [3]

1. Wipe door gaskets
2. Clean air filters and condensers
3. Scrape excess ice
4. Set an annual reminder to clean and thaw

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02 FEBRUARY 2027

SUN	MON	TUE	WED	THU	FRI	SAT
31	1	2 *World Wetlands Day*	3	4	5	6
7	8 *Lab Safety Awareness Week Begins*	9	10	11 *International Day of Women & Girls in Science*	12 *Lab Safety Awareness Week Ends*	13
14 *Valentine's Day*	15 *President's Day*	16	17	18	19	20 *World Day of Social Justice*
21 *Engineering Week Starts*	22	23	24	25	26	27 *Engineering Week Ends*
28	1	2	3	4	5	6

MARCH 2027

RECYCLING *In Labs*

Improve Recycling in Your Lab [3,4]

1. **Know Your Bins.** Make sure everyone in your lab space knows what should be put into each bin: recycling, landfill, or biohazard.
2. **Don't "Wish-cycle".** Don't throw materials into your recycling bins hoping they will be recycled. If you are unsure, do a little research to double check, and if in doubt, throw it out to avoid contaminating the recyling stream.
3. **Make it Easy.** Post signage around bins, use photos, or color code materials in your lab to help make sure waste in your lab is properly recycled or disposed of.

FUN FACT

As of 2024, 54% of UMD's waste is diverted to recycling!

Participating in Green Labs can help improve waste sorting habits and increase diversion.



[2]

LEARN MORE

Scan to learn more about recycling and the waste stream.

Get involved with UMD's Contaminated Lab Plastics Recycling Program.

UMD's lab plastics recycling program accepts:

- 4 LDPE — Low-Density Polyethylene
- 2 HDPE — High-Density Polyethylene
- 5 PP — Polypropylene

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03 MARCH 2027

SUN	MON	TUE	WED	THU	FRI	SAT
28	1	2	3 *World Wildlife Day*	4 *World Engineering Day for Sustainable Development*	5	6
7	8	9	10	11	12	13
14 *Spring Break Starts* *Daylight Savings Time*	15	16	17 *St. Patrick's Day*	18 *Global Recycling Day*	19	20 *Spring Equinox* *World Rewilding Day*
21 *Spring Break Ends*	22 *World Water Day*	23	24	25	26	27
28 *Easter Sunday*	29	30 *International Day of Zero Waste*	31	1	2	3

APRIL 2027

CLIMATE ACTION & Earth Day

Choose 3 Challenges to Try This Earth Month [3, 4]

1. **Turn it Off:** Prioritize turning off lights and equipment when not in use. Leave smaller equipment unplugged until ready to use.
2. **Shut the Sash:** Shut fume hood sashes when not in use.
3. **Choose Reusable:** Use glassware or reusable plastic in the lab versus single use plastics when safe and applicable.
4. **Combine Orders:** Combat shipping waste by ordering materials all at once instead of multiple shipments.
5. **Watch Your Water:** Use ultrapure water only when necessary.
6. **Check Your Waste:** Audit your lab's waste on a monthly basis to ensure correct waste stream seperation.

FUN FACT

The first Earth Day was held on April 22, 1970. [1]

There have been 57 years of Earth Days!



[2]

LEARN MORE

Scan to see more challenges to complete during Earth Month.

Earth Month Challenge

- ☐ Measure your baseline for each challenge you choose
- ☐ Check progress on a regular basis
- ☐ Reflect at the end of the month how much progress or behavior changes you have made in the lab!

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04 APRIL 2027

SUN	MON	TUE	WED	THU	FRI	SAT
28	29	30	31	1 *April Fool's Day*	2	3
4	5	6	7 *World Health Day*	8	9	10
11	12	13	14	15 *Tax Day*	16	17
18	19 *National Environmental Education Week Starts*	20	21	22 *Earth Day*	23 *National Environmental Education Week Ends*	24
25	26	27	28	29	30	1

MAY 2027

REGULATED *Materials*

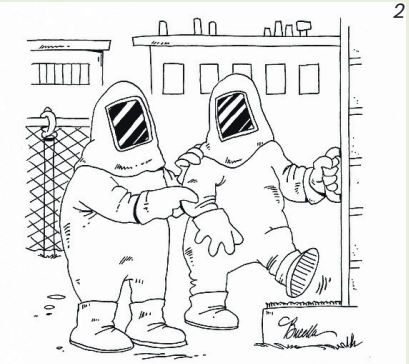
Reducing Hazardous Waste [3]

1. **Practice proper inventory control.** Label all chemicals correctly, and ensure all lab members understand the inventory management system. Try using *ChemTracker,* a web-based chemical inventory management software created by Stanford University.
2. **Substitute substances.** Look for less toxic substitutes when possible.
3. **Micro-scale experiments** to avoid unnecessary waste.

FUN FACT

More than 3 billion tons of hazmat are shipped every year. [1]

Hazmat shipments account for 12% of all freight tonnage shipped within the United States.



"Remember, before entering, make sure you wipe your feet on the hazmat." [2]

LEARN MORE

Scan to see how regulated waste is managed at UMD.

What Waste is "Regulated"?

1. Hazardous
2. Radioactive
3. Biohazardous
4. Multihazard
5. Mixed

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05 MAY 2027

SUN	MON	TUE	WED	THU	FRI	SAT
25	26	27	28	29	30	1 *National Inventors Month*
2	3 *Occupational Safety & Health Week Starts*	4	5	6	7 *Occupational Safety & Health Week Ends*	8
9	10	11	12	13	14	15
16 *International Day of Light*	17	18	19	20	21	22 *International Day for Biological Diversity*
23	24	25	26	27	28	29
30	31 *Memorial Day*	1	2	3	4	5

JUNE 2027

ENERGY *Efficiency*

Tips for Energy Efficiency [3]

1. **Turn off unused lab equipment.** Not all equipment is used all the time, every day. Unplug certain devices intermittently, such as computers and printers at night.
2. **Only run autoclaves when full.** Autoclaves are similar to a dishwasher: wait until they are mostly full to start a cycle. This will save water and energy!
3. **Switch to energy efficient devices.** When it's time to replace equipment, consider purchasing energy efficient equipment, like those that are Energy Star-rated.

FUN FACT

As of 2025, the world's energy system is only 40% efficient, meaning 60% of energy inputs are wasted. [1]

The United States wastes almost 70% of energy inputs—even less efficient!



[2]

LEARN MORE

Scan to see more energy efficient habits.

Nightly Unplug List [3]

1. PCR machines
2. Desktop computers
3. Printers
4. Hot plates
5. Chilled centrifuges

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06 JUNE 2027

SUN	MON	TUE	WED	THU	FRI	SAT
30	31	1	2	3	4	5 *World Environment Day*
6	7	8 *World Oceans Day*	9	10	11	12
13	14	15 *Global Wind Day*	16	17 *World Day to Combat Desertification & Drought*	18	19 *Juneteenth*
20	21 *Summer Solstice*	22 *World Renewable Energy Day*	23 *Women in Engineering Day*	24	25	26
27	28	29	30	1	2	3

JULY 2027

WASTE Reduction

FUN FACT

Life scientists generate 5.5 million tons of plastic waste per year. [1]

These scientists account for only 0.1% of the population.



[2]

Tips for Reducing Waste [4]

1. **Replace disposable material with reusables.** Choose glass or metal over plastic when possible for test tubes, pipettes, filter bottles, and petri dishes.
2. **Use digital platforms.** Consider switching over to a digital platform if you generate a lot of paperwork.
3. **Scale down experiments.** Consider if any reactions can be done on a smaller scale. This can be measured by calculating the waste E-factor.

LEARN MORE

Scan to see more ways to reduce waste.

What's the E-factor? [3]

$$\text{E-factor} = \frac{\text{Total Mass of Waste from Process}}{\text{Total Mass of Product}}$$

The ideal E-factor is 0, with higher E-factors indicating more waste created.

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07 JULY 2027

SUN	MON	TUE	WED	THU	FRI	SAT
27	28	29	30	1 *Clean Beaches Week Begins* *Plastic Free July*	2	3
4 *Independence Day*	5	6	7 *Clean Beaches Week Ends*	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26 *International Day for the Conservation of the Mangrove Ecosystem*	27	28 *World Nature Conservation Day*	29	30	31

AUGUST 2027

WATER Conservation

Tips for Conserving Water [3]

1. **Check for leaks and report them promptly.** Follow any water lines and machinery connected to water. Once found, report to Facilities Management.
2. **Run equipment that uses water when full,** including glassware washers, autoclaves, and dishwashers.
3. **Only use purified water when needed.** Deionized (DI), distilled, and reverse osmosis (RO) water go through intensive filtration and treatment that requires more water.

FUN FACT

Leaky faucets that drip once per second can waste 3,000 gallons of water per year. [1]

Look for leaks along any water lines.



"You got something for sinuses? I've been dripping all night..." [2]

LEARN MORE

Scan to see more water-saving habits.

Where can you find leaks? [4]

1. Autoclaves
2. Water-cooled equipment
3. Ice machines
4. Refrigerators

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08 AUGUST 2027

SUN	MON	TUE	WED	THU	FRI	SAT
1 *National Water Quality Month*	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27 *World Lake Day*	28
29	30 *World Water Week Begins*	31	1	2	3 *World Water Week Ends*	4

SEPTEMBER 2027





SHUT *The Sash*

What is Shut the Sash? [3]

"Shut the Sash" reminds users to close fume hood glass to save energy, cut costs, and extend equipment life. This practice is specifically effective for **Variable Air Volume (VAV)** hoods.

Variable Air Volume (VAV) Hoods	***Constant Air Volume (CAV) Hoods***
Varies the amount of air exhausted, based on sash height, to maintain a constant face velocity.	Exhausts the same amount of air at all times, regardless of sash height.

Don't know which hood you have? Reach out to lab safety or lab facilities management!
Facilities Management: fmcrc@umd.edu

FUN FACT

Possible energy savings for the more than 750,000 hoods across the United States is $1.39 billion annually.[1]

Shutting them can save on energy and utility costs!



"At least we have great fumes to run on!" [2]

LEARN MORE

Scan to learn more information about shutting the sash.

What are Fume Hoods Used For?

1. Capturing harmful fumes in the lab.
2. Preventing spills and runaway reactions.
3. Providing a barrier against radiation.
4. Preventing corrosion of lab spaces and equiptment.

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09 SEPTEMBER 2027

SUN	MON	TUE	WED	THU	FRI	SAT
29	30	31	1	2	3	4
5	6 *Labor Day*	7	8	9	10	11
12	13 *National Pollution Prevention Week Begins*	14	15	16 International Day for Ozone Layer Preservation	17 *National Pollution Prevention Week Ends*	18 *World Cleanup Day*
19	20	21	22	23 *Autumn Equinox*	24	25
26	27	28 *International Day of Scientific Culture*	29	30	1	2



OCTOBER 2027



CULTURE of Sustainability

Steps to Foster a Culture of Sustainability

1. **Participate in sustainability events.** October is Campus Sustainability Month (CSM)! Attend events like the CSM celebration with your lab members.
2. **Share supplies and tips.** Communicate with other labs to swap supplies, or share sustainability steps that have been implemented in your own lab.
3. **Spread the word!** Know of any labs that aren't involved with Green Labs? With permission, send their email to greenlabs@umd.edu to get them started.

FUN FACT

Campus Sustainability Month (October) was created by the Association for the Advancement of Sustainability in Higher Education as the autumn complement to Earth Day (in April). [1]



2

"I know we're attending a conference on sustainability, but aren't we overdoing it?"

LEARN MORE

Scan to see how your lab can continue promoting sustainability, both within the lab and with others.

Reviewing Lab Sustainability Culture [3]

1. **Vision for the future.** Does the lab mission statement involve sustainability?
2. **Baseline.** What are the attitudes towards sustainability in your lab?
3. **Champions.** Who keeps lab members accountable?

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10 OCTOBER 2027

SUN	MON	TUE	WED	THU	FRI	SAT
26	27	28	29	30	1 *Campus Sustainability Month*	2
3	4 *World Habitat Day*	5	6 *Energy Efficiency Day*	7	8	9
10	11 *Indigenous Peoples' Day*	12	13	14	15	16
17	18	19	20	21	22	23
24 *International Day of Climate Action*	25	26	27	28	29	30
31	1	2	3	4	5	6

NOVEMBER 2027

GREEN Chemistry

What is Green Chemistry? [3]

Green Chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. Green chemistry:

1. Applies across the life cycle of a chemical product, including its design, manufacture, use, and ultimate disposal.
2. Reduces the negative impacts of chemical products and processes on human health and the environment.
3. Applies innovative scientific solutions to real-world environmental problems

FUN FACT

The Pollution Prevention Act of 1990 helped formalize Green Chemistry as a proactive, upstream solution to pollution and chemical hazards. [1]



[2]

LEARN MORE

Scan to view the 12 Principles of Green Chemistry.

Do you recognize principles from previous months?

1. Waste Prevention
2. Energy Efficiency
3. Hazardous Material

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11 NOVEMBER 2027

SUN	MON	TUE	WED	THU	FRI	SAT
31	1	2	3	4	5	6
7	8 *National STEM Day*	9	10 *World Science Day for Peace and Development*	11 *Veterans Day*	12	13
14	15 *America Recycles Day*	16	17 *GIS Day*	18	19	20
21	22	23	24	25 *Thanksgiving Day*	26 *Thanksgiving Holiday*	27
28	29	30	1	2	3	4

DECEMBER 2027

HOLIDAY Powerdown

Tips for a Sustainable Holiday [3]

1. **Review your year.** How did your lab's monthly sustainable challenges go? What was one success? What is something to improve on next year?
2. **Turn everything off.** Before leaving for holiday break, complete an energy powerdown by shutting off equipment and lights.
3. **Celebrate!** For parties *outside* of the lab, opt for reusable dining-ware, consider plant-based meals, and focus on making memories over giving gifts.

FUN FACT

The average American produces 25% more waste during the holiday season. That amounts to around one million tons of extra waste each week! [1]

Holiday waste like packing material and unwanted gifts often go to landfills.



[2]

LEARN MORE

Scan for more ways to celebrate sustainably. See you in 2028!

Sustainable Gift Ideas [3]

1. Unique thrifted pieces
2. Activities or experiences rather than objects
3. Handmade gifts
4. Reusable items

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12 DECEMBER 2027

SUN	MON	TUE	WED	THU	FRI	SAT
28	29	30	1	2 *World Futures Day*	3	4 *Wildlife Conservation Day*
5 *World Soil Day*	6	7	8	9	10 *International Human Rights Day*	11
12	13	14	15	16	17	18
19	20	21 *Winter Solstice*	22	23	24	25 *Christmas Day*
26	27	28	29	30	31 *New Year's Eve*	1 *New Year's Day*

RESOURCES

JANUARY

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FEBRUARY

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MARCH

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2. https://jokes.scoutlife.org/topics/recycling-jokes/
3. https://mygreenlab.org/the-beaker-blog/how-to-reduce-lab-waste-practical-strategies-for-sustainable-labs/
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2. http://www.incidentalcomics.com/2013/04/a-cartoon-for-earth-day.html
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3. The E-Factor in Green Chemistry. (2026, March 8). University of Missouri. https://chem.libretexts.org/@go/page/285715
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AUGUST

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SEPTEMBER

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OCTOBER

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3. https://19january2021snapshot.epa.gov/greenchemistry/basics-green-chemistry_.html

DECEMBER

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For questions and information, email **greenlabs@umd.edu**

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NOTES

UNIVERSITY OF MARYLAND
GREENLABS

What is Green Labs?

The **Green Labs Program** is an initiative to help campus labs implement sustainable practices. UMD's Green Labs Program is designed to:

- Empower every individual in science with the knowledge and tools to make a difference through their work,
- Promote a thriving culture of sustainability in labs, and
- Encourage research practices that are mindful of societal, environmental, and resource impacts.

The Green Labs calendar is a way for researchers to learn “green habits” and to enact them within their own labs.

Monthly Preview











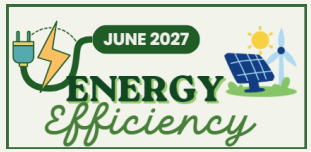













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SUSTAINABILITY

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